

What is claimed is:

1. An image information reading apparatus comprising
a light source for generating a light beam,
photoelectric reading means for detecting intensity of
incident light in an photoelectric manner,

a sample holding portion for holding a scanning target
carrying certain image information,

an optical head which leads the light beam emitted by
the light source to the scanning target placed on the sample
holding portion so that the scanning target is irradiated
with the light beam, and which leads induced light emitted by
the scanning target in response to the irradiation thereon to
the photoelectric reading means,

primary scanning means for moving the optical head in
one direction with respect to the scanning target so that the
scanning target is scanned in said one direction with the
light beam led thereto by the optical head,

secondary scanning means for moving at least one of the
sample holding portion or the optical head in another
direction which is substantially orthogonal to said one
direction, and

an optical element which is provided at a part on an
optical path of the induced light between the optical head
and the photoelectric reading means and which has a
sufficient refractive power for collecting the induced light
led toward the photoelectric reading means by the optical

head.

2. An image information reading apparatus as defined in Claim 1, wherein the optical element includes a lens with a positive refractive power, a parabolic mirror or a concave mirror.

3. An image information reading apparatus as defined in Claim 1, wherein

the secondary scanning means is capable of moving the optical head, and

the optical element comprises at least a first optical element to be moved together with the optical head by the secondary scanning means and a fixed second optical element.

4. An image information reading apparatus as defined in Claim 3, wherein the optical element includes a lens with a positive refractive power, a parabolic mirror or a concave mirror.

5. An image information reading apparatus as defined in Claim 1, wherein

the scanning target carrying the certain image information is a sample in which an organic substance marked with fluorescent dye is distributed,

the light beam is a beam of stimulating light which is capable of stimulating the fluorescent dye, and

the induced light is fluorescence from the stimulated fluorescent dye.

6. An image information reading apparatus as defined in

Claim 5, wherein the sample is any one of a gel-like supporting object, a membrane filter onto which the gel-like supporting object is transcribed, and an accumulation phosphor sheet.

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